

Spot Safety Project Evaluation

Project Information

Order ID: 41000033960

Project ID: 03-07-225

Location: NC 211 and SR 1115 (Stone Chimney Road)

County: Brunswick

City: Supply

Division: 3

Signal ID: 03-1020

Countermeasures: Install a traffic signal in the intersection with Flashing Yellow Arrow on NC 211 and extend the right turn lane along the northbound leg of SR 1115. (Implemented July 2008)

Updated signal phasing and heads on SR1115. (Implemented December 2013, note that this countermeasure was not assessed within this evaluation)

Project Completion: July 2008

Project Cost: \$211,000.00

Map and Aerial (from Google Maps, Coordinates are: 34.014503,-78.268678)



Naive Before and After Analysis

Before Period: February 1, 2002 through May 31, 2008 (6 years, 4 months)

Const. Period: June 1, 2008 through September 30, 2008

After Period: October 1, 2008 through February 28, 2015 (6 years, 4 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 211 and SR 1115 approaches.

Target Crashes: Frontal Impact Crashes (left-turn, same roadway; left-turn, different roadway; right-turn, same roadway; right-turn, different roadway; head-on; and angle crashes) in the intersection.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	39	27	- 30.8 %
Total Severity Index	5.17	6.55	+ 26.7 %
Target Crashes	28	11	- 60.7 %
Target Crash Severity	5.76	9.91	+ 72.0 %
Volume (2005, 2011)	14,000	13,800	- 1.4 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	N/A
Class A injury Crashes	0	1	+ 100.0 %
Class B injury Crashes	5	0	- 100.0 %
Class C Injury Crashes	17	10	- 41.2 %
Property Damage Only	17	16	- 5.9 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Angle Crashes (Target)	23	3	- 87.0%
Left Turn, Same Roadway Crashes (LTSR) (Target)	5	7	+ 40.0 %
Rear End Crashes on NB SR 1115	9	4	- 55.6 %

Overall Summary Results

Total Crashes:	- 31 %	(reduction)
Total Crash Severity:	+ 27 %	(increase)
Target Crashes:	- 61 %	(reduction)
Target Crash Severity:	+ 72 %	(increase)
Volume:	- 1 %	(reduction)

Additional Summary Results

Angle Crashes (Target):	- 87 %	(reduction)
LTSR Crashes (Target):	+ 40 %	(increase)
Rear End Crashes on NB SR 1115:	- 56 %	(reduction)

Items for Discussion/Concerns

Left Turn, Same Roadway crashes within the intersection increased from the before period (5 crashes) to the after period (7 crashes). However, angle crashes decreased from 23 to 3 from the before period to the after period.

The Rear End crashes along northbound SR 1115 were decreased by five crashes from the before to the after (9 crashes to 4 crashes).

Data Prepared For

The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Elizabeth Scott, EI
Work Group/Consultant: Stantec Consulting Services Inc
Date: March 27, 2015

SS# 03-07-225
Order#41000033960
Brunswick County
Before Period
2/1/02 - 5/31/08

LEGEND

MOVING VEHICLE

PARKED VEHICLE

PARKING VEHICLE

MOVABLE OBJECT

HEAD ON

REAR END

RAN OFF ROAD

DAYLIGHT CRASH

NIGHT CRASH

ANGLE

TURNING

BACKING

SIDESWIPE

INJURY

FATALITY

9 MPH OR LESS

10 MPH TO 19

20 MPH TO 29

30 MPH TO 39

40 MPH TO 49

50 MPH TO 59

60 MPH TO 69

70 AND UP

SPEED UNKNOWN

A

ANIMAL

P

PEDESTRIAN

B

BICYCLE

T

TRAIN

*

DRIVER AT FAULT

D

DRY

W

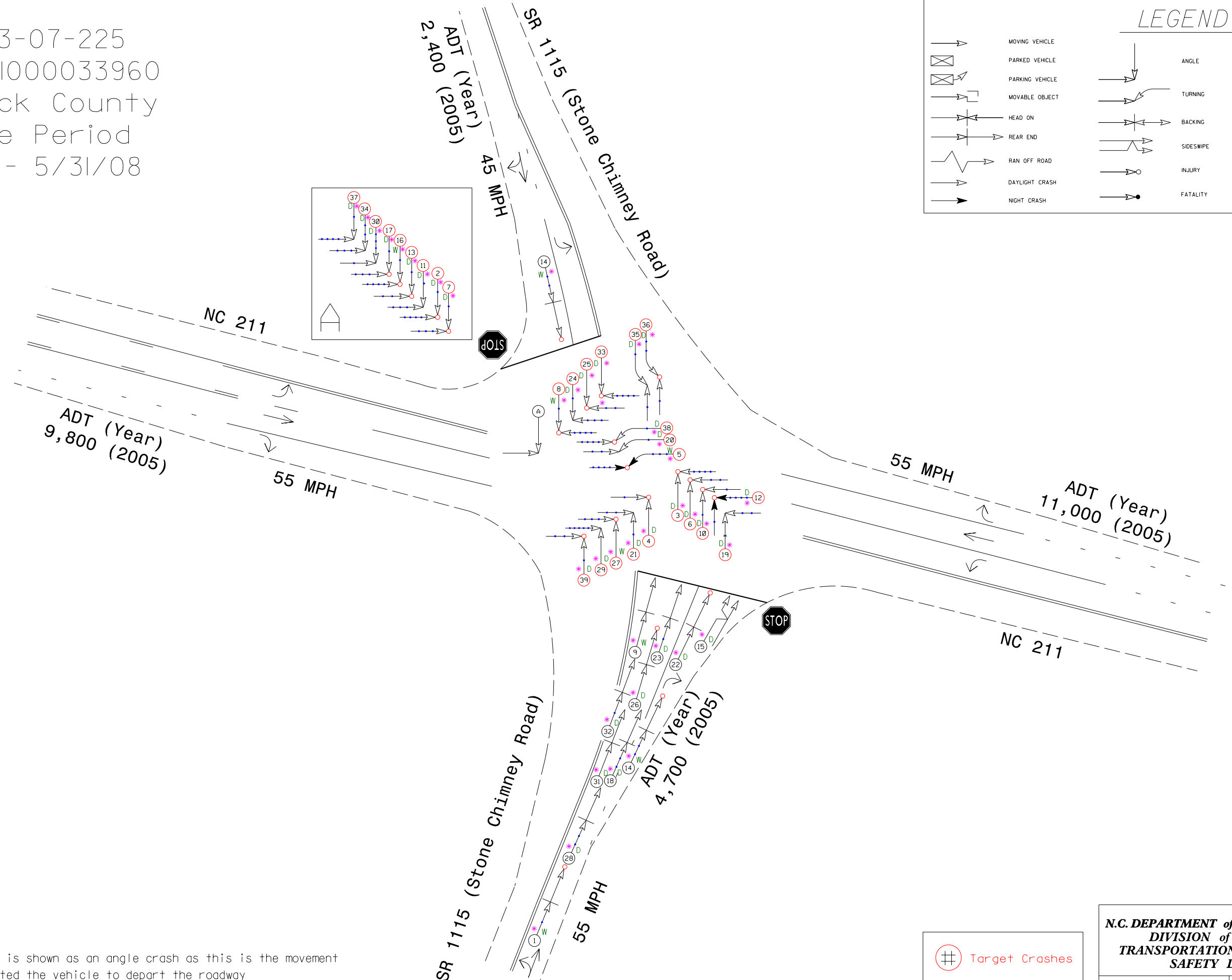
WET

I

ICY OR SNOWY

O

Other



* Crash 19 is shown as an angle crash as this is the movement that prompted the vehicle to depart the roadway

Target Crashes

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and
SAFETY DIVISION

Date: 3/27/2015

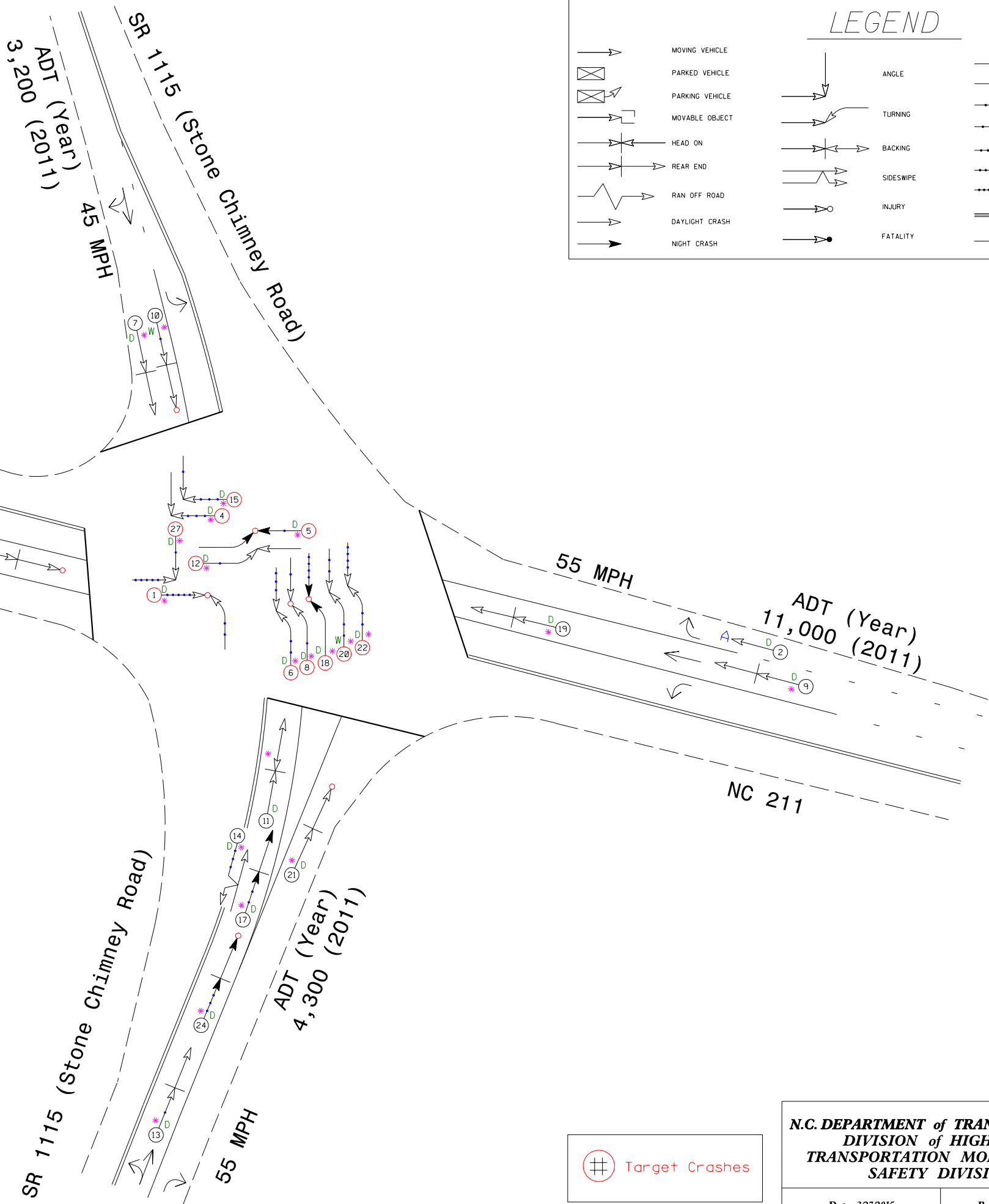
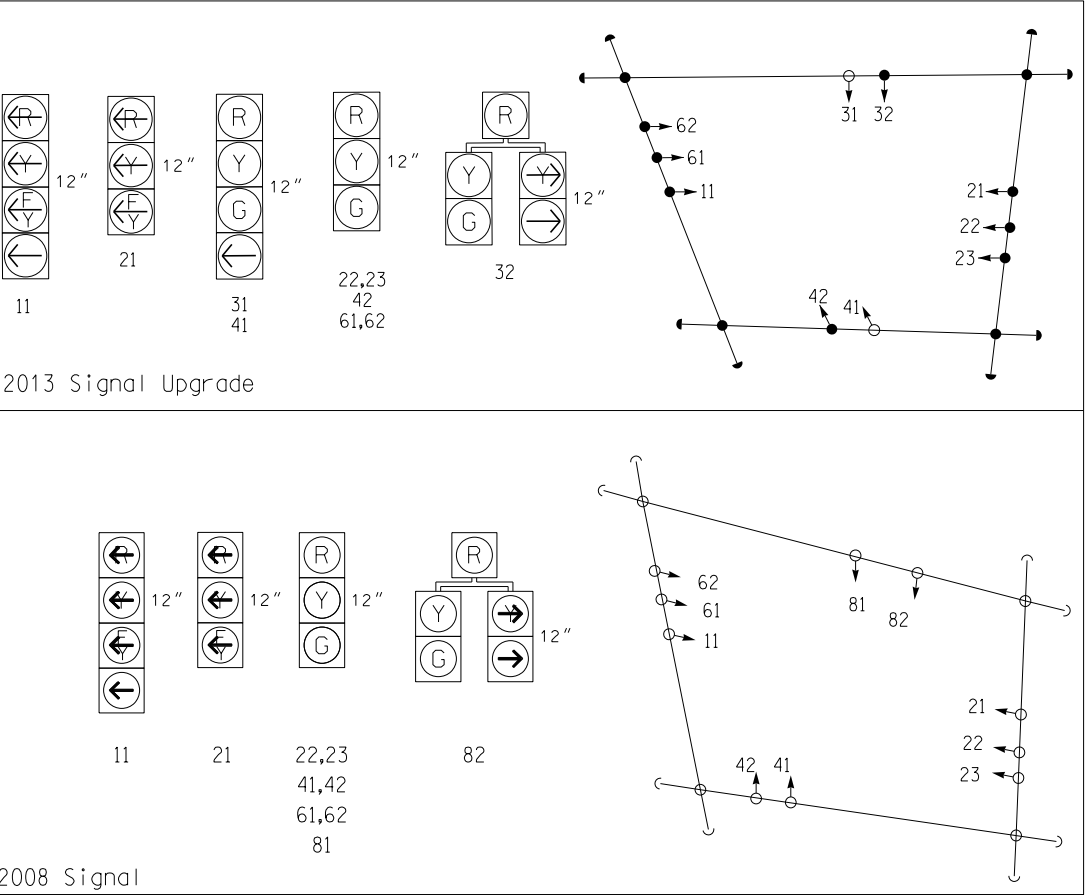
Prepared By: ESS



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SS# 03-07-225
Order#41000033960
Brunswick County
After Period
10/1/08 - 2/28/15

SIGNAL I.D.: 03-1020



Target Crashes

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and
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